Commonality of Right-Handedness Rooted in Latent Dual Function of Primary Motor Cortex

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Introduction

The phenomenon of being able to sense when someone is staring at the back of one's head is well-documented if poorly understood. Members of the scientific community are largely hesitant to so much as acknowledge the plausibility of the phenomenon given the paranormal flavor of the ability. Studies, nonetheless, have been done that clearly point to individuals being able to discern whether they are being watched a greater-than-likely percentage of the time.

Abstract

90% of humans around the world are right-handed and we live in a world tailor-made for righties, much to the chagrin of southpaws. On the topic of why right-handedness is a common trait, there is no widespread consensus. A currently popular theory holds that the spinal cord actually determines the dominant hand. While I found that theory to be a refreshing departure from neurological theories and it had the veneer of plausibility given that most people sleep on their left side (the idea being that if a fetus sleeps on its left side like its mother that it causes irregularities in the density of nerves in the spinal cord, leading to altered conduction,) I now believe that hypothesis to be erroneous.

My theory on this topic may help to solve at least three different unsolved mysteries concerning human neurology, all of which, I believe, can be traced to the right portion of the Primary Motor Cortex, specifically. The first is the mystery of how it is that people often know when they are being stared at from behind.

In order for another's mind to recognize and assess you when they see you standing there, the eye must first send its collected information to the occipital lobe at the rear of the brain. That information must then be transmitted to the frontal lobe so that the information can be further processed in support of overall situational awareness. In so doing, a cross-referencing function is performed in which the occipital lobe repeatedly communicates with the frontal lobe and in order to do so, sends signals through other areas of the brain including the PMC, which is located in the midbrain. Already known to neurology is the concept of a mirror-neuron -- a neuron that emits, ostensibly, an identical pulse regardless of whether one is performing an action or watching someone else perform that same action.

I propose that in the right half of the PMC there is a subsection responsible for detecting when another is observing a person provided that their observation occurs within about 100 meters but without regard to whether the observation is direct or through a video monitor. This capability seems to

depend not only upon mirror neurons but upon the exceptional ability of specialized amplifier neurons to pick up signals that "leak" from the mind of others nearby. After all, EEGs work on the basis of detecting emitted signals, albeit from a very close distance. This phenomenon strongly implies, however, that signals can be detected from much greater distances of perhaps 100 meters.

These amplifier neurons, coupled with mirror neurons, have pent-up electrical energy that is discharged upon stimulus with a very specific pattern consistent with the recognition of another human form. The ability to recognize fellow humans both by face and gait and general bodily appearance are genetically/neurologically innate abilities which do not need to be learned. Thus, the brain itself already has the information necessary to know what a fellow human looks like. If we take this reasoning a step further, we can consider what might be possible if the brain also "knows" what the signal pattern associated with recognition of a fellow human looks like. That concept would actually require far fewer "bits" of information to convey than the data necessary to perform the task of recognition itself. It could be simple enough, I submit, that the faintest signal associated with this recognition could be discerned from a substantial distance.

If the part of the brain that facilitates this remote sensing is located in the right side of the PMC, as I believe it is, this would mean that the neurons of this remote sensing subsection of the PMC would be introducing substantial extraneous electrical energy into that area of the brain. Since that part of the brain's primary responsibility is motor control, any added signal not associated with the primary function would, logically, tend to disrupt that primary function. The remote sensing sub-node's positioning on the right side of the cortex would explain the difficulty most people experience in doing things that require fine motor control with their left hand. The right side of the PMC, we know, controls the left side of the body and the left controls the right side. Thus, any disruption to the right-brain portion of the PMC would impact motor control over the left side of the body.

It is also worth noting that this ability to sense when one is being watched seems, in my experience, to be greatest when the right side of the head is oriented toward the individual making the observation. This would seem to further support the theory that a remote sensing sub-node is, indeed, located within the right-most portion of the PMC. Further supporting this hypothesis is my personal observation that I tend to drop objects I am holding in my left hand at the instant someone locks eyes on me from behind. This implies a fairly substantial momentary disruption to the PMC's control over just one side of the body, one that exclusively occurs in conjunction with being observed. I have often blamed others for causing me to drop things instinctively since I observed quite clearly that a pattern had emerged in which their observations seemed to exactly synchronize with my dropping the object. Needless to say, I was accused of being unreasonable and looked at like I was quite insane. It now seems that I was, in fact, correct the entire time.

Lastly, there is, of course, the question of why it is that most people report sleeping most soundly while on their left side. This, too, would seem to be

secondary to this remote-sensing ability. The tactical advantage associated with being able to sense when one is being watched is just as important if not more important when one is sleeping, given one's vulnerability at that time. Most people report feeling most at-ease when on their left side and individuals experiencing anxiety attacks are advised to lie down on their left side in clinical settings. My hypothesis, if meted out, would go a long way toward explaining why people experience reduced anxiety and better ability to sleep when on their left side.

Conclusion

There would be a clear evolutionary advantage associated with an ability to remotely sense that someone in their proximity with potentially hostile intentions has set eyes upon them. If the theory laid out here is correct, it would seem to suggest that a majority of human beings have through evolution acquired the gene(s) necessary to facilitate this fascinating neurological capacity and that remote sensing is, in fact, intertwined with other neurological phenomena.